

REMARKS

Receipt of the Office Action of October 21, 2004, is gratefully acknowledged.

Claims 22-47 have been examined and rejected as follows: (1) claims 22, 26-37, 40, 41, 44 and 45 as anticipated by Tapp under 35 U.S.C. 102(b); and (2) claims 23-25, 38, 39, 46 and 47 as unpatentable over Tapp in view of Braun et al. under 35 U.S.C. 103(a).

It is noted that claims 42 and 43 have not been rejected nor indicated as containing allowable subject matter. In a telephone discussion with the examiner today, it was confirmed that claims 42 and 43 are neither rejected or allowed.

(1) Rejection under 35 U.S.C. § 102(b)

Claims 22 is the only claim in independent form. Accordingly, showing that claim 22 is not anticipated by Tapp results in the conclusion that claims 23-47 are also not anticipated by Tapp.

Claim 22 defines the composite material of the invention as having three layers which can be seen in an exemplary manner in Figs. 1 and 2. For convenience of discussion Figs. 1 and 2 are reproduced below.

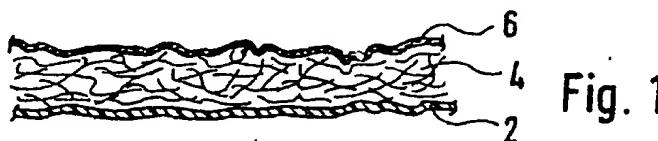


Fig. 1

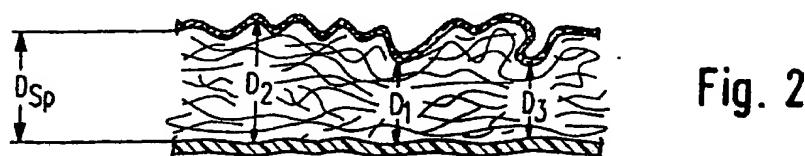


Fig. 2

Included are layers 2, 4 and 6. Layer 2 is defined as the second layer, layer 4 as the first layer of substantially continuous staple fibers having a diameter of 15

to 35 μm , and layer 6 as the third layer having microfibers with a diameter of less than 10 μm . The next structural distinction defined by claim 22 can be seen in Fig. 2. The third layer is provided on the surface of the first layer which is "remote from said second film layer", and it is provided "by a melt-blown process". The provision of the third layer on the first layer results in a three-dimensional penetration of the surface of the first layer 4 (Fig. 2) such that the mean spacing between the third layer 6 and the second layer 2 is less than the thickness of the first layer 4. That is, the mean spacing of D_1 - D_3 shown in Fig. 2 is less than D_{sp} .

The composite material defined by claim 22 and discussed above is not, it is respectfully submitted, anticipated by Tapp simply because all of the structural features of claim 22 are not found in Tapp. It is well settled to the point that no citations are even necessary that a reference cannot anticipate a claim(s) unless each and every positively recited limitation of the claim(s) is found in the single reference. Tapp does disclose a composite material formed with microporous film and at least one layer of a nonwoven fabric such as a carded web of staple fibers, a spunbond fabric, a meltblown fabric and a self-bonded nonwoven web (column 2, lines 46 to 57), with at least one layer providing "enhanced strength and support to reinforce the film". This is as close as Tapp gets to the composite material of claim 22. When looking at column 2, lines 46 ff. of Tapp no further disclosure directed to the subject-matter of independent claim 22 may be derived. For example, in column 16, lines 51 to 57, Tapp further mentions:

Examples of materials useful as support layers include polymeric foam products, woven fabrics and nonwoven fabrics such as carded webs, spunbond fabrics, meltblown fabrics and self-bonded, fibrous, nonwoven webs. These materials are discussed in more detail below.

Tapp continues in column 16, lines 58 ff. by referring to "carded nonwoven

"webs used as a second layer" in addition to the film. This is still a two-layer arrangement, however. There is no mention of a further microfiber layer with microfibers provided directly to this carded nonwoven web onto the side thereof which is remote from the film.

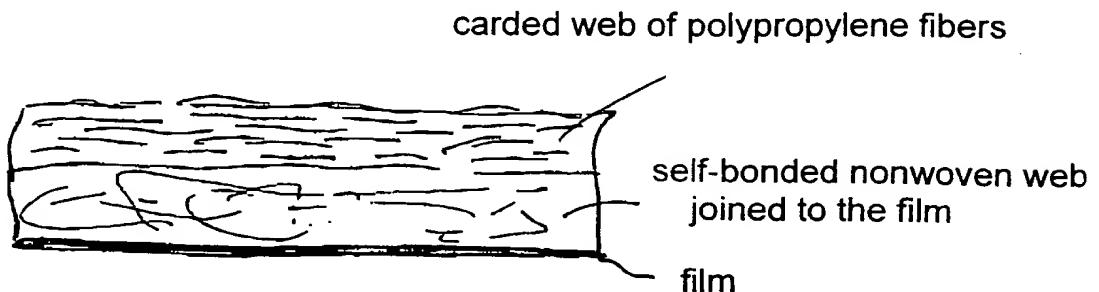
Then, in column 17, line 45 Tapp mentions a "spunbond fabric used as a second layer" in addition to the film. Again this is a two-layer arrangement.

In column 18, lines 1 to 24 a "meltblown fabric" used as a second layer in addition to the film which can be a meltblown microfibrous nonwoven web with a plurality of small diameter fibers having an average diameter of not greater than about 10 μm is mentioned. Accordingly, this meltblown microfibrous nonwoven web may be associated with the layer 6 of microfibers according to the present claim 22. However, according to Tapp this meltblown microfibrous nonwoven web is joined directly to the film. There is no mention of a further layer. This is still, therefore, a two-layer arrangement. Accordingly, column 18, lines 1 to 24 cannot anticipate the specific three-layer arrangement of pending claim 22, which requires the microfiber layer to be provided directly on the surface of the layer 4 of substantially continuous staple fibers with a diameter of 15 to 35 μm .

Further, Tapp mentions in column 18, lines 25 to 41 a "woven fabric" useful as a second layer, which is of no interest relative to claim 22. Tapp carries on with a polymeric foam product as a second layer which is also not of interest (column 18, lines 42 to 52).

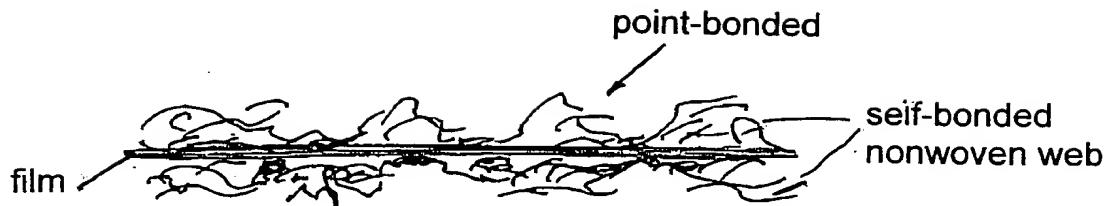
Still further, Tapp mentions a "self-bonded, fibrous, nonwoven web of substantially continuous filaments" in column 18, lines 53 ff. This layer of self-bonded fibrous, nonwoven web of substantially continuous filaments may be associated with the layer 4 of substantially continuous staple fibers of claim 22. However, this is still a two-layer arrangement. There is no disclosure whatsoever of a further microfiber layer provided directly on this self-bonded nonwoven web on the side remote from the film layer.

Turning now to some three-layer embodiments: the examiner is correct in pointing to column 26, line 64 to column 27, line 18. There, Tapp discloses an embodiment where a self-bonded nonwoven web is between a carded web of polypropylene fibers and a microporous film, which leads to the following arrangement:



The carded web layer is the layer which is to contact the skin in use (i. e. because carded nonwovens are experienced as soft feeling). Accordingly, if the Examiner associates the self-bonded nonwoven web as the layer 4 of substantially continuous fibers of claim 22 then the further carded web layer of polypropylene fibers would have to be associated with the microfiber layer. However, this is not the case. Our (third) microfiber layer cannot be regarded as a carded web. On the contrary, it consists of randomly oriented microfibers with a diameter of 10 µm which are (according to claim 22) directly applied to the layer 4. There is no mention whatsoever of such a microfiber layer which is applied directly by a meltblown process to the self-bonded nonwoven web layer in column 26, line 64 to column 27, line 9.

In the further embodiment on column 27, lines 10 to 29, Tapp discloses a further three-layer composite wherein a layer of a self-bonded nonwoven web is point-bonded to each side of a porous film. This means that the film layer is in the middle of two self-bonded nonwoven webs. This embodiment can be illustrated as follows:



According to claim 22 of the present invention the film layer 2 is not in between, the layer 4 is and it has substantially continuous fibers with a diameter of 15 to 35 μm which is sandwiched in the middle. Therefore, this embodiment cannot anticipate the subject-matter of claim 22 either.

(2) Rejection under 35 U.S.C. § 103(a)

It is further respectfully submitted that the subject-matter of claims 23, 25, 38, 39, 46 and 47 which define a very specific three-layer arrangement is not obvious, but involves an inventive step. Claim 22 requires a film layer, and a layer of substantially continuous fibers with a diameter of 15 to 35 μm and provided directly on the full surface of this continuous fiber layer there is a layer of microfibers with diameter of less than 10 μm which are directly applied thereto and which extend and penetrate into the surface as claimed. Tapp does not anticipate such arrangement or render such arrangement obvious.

E.g., when starting from the embodiment of Tapp, column 26, line 64 to column 27, line 9, the person skilled in the art would not replace the carded web layer of polypropylene fibers which is known as being a suitable skin-contacting layer (which according to column 27, line 6 forms the inner side of a hygienic article) by a microfiber layer as claimed which will be perceived as being more harsh. A meltblown microfiber layer will rather be perceived as a thermoplastic covering than as a smooth fibrous layer for performing a skin contact to the user, such as the carded web layer does. It is to be emphasized that the composite material according to claim 22 is to be used in directly opposite orientation with

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the microfiber layer 6 facing away from the skin of the user (as is claimed with claim 47).

Starting from Tapp, it would be contradictory to the teaching and disclosure of Tapp to replace the carded web layer of polypropylene fibers of the column 27-embodiment by some other layer, let alone by the microfiber layer as claimed with pending claim 22.

It is respectfully submitted that no combination of the references of record can render claims 22-47 obvious as none of the references teach or suggest the three layer combination claimed.

It is therefore respectfully submitted that neither Tapp nor any other reference or combination of references may render the subject-matter of claim 22 obvious.

In view of the foregoing, reconsideration and re-examination are respectfully requested and claims 22-47 found allowable.

Respectfully submitted,

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